Claims

[c1] What is claimed is:

1. A method of defining a welding-type process, the method comprising:

detecting consumable presence in an electrode holder;

receiving feedback of sensed characteristics of the consumable; and

automatically setting an operating parameter of a welding-type process based on at least consumable type.

[c2] 2. The method of claim 1 further comprising measuring a resistance between the consumable and the electrode holder, comparing a value of the resistance to a look-up table, and determining consumable type therefrom.

[c3] 3. The method of claim 1 further comprising measuring a surface light reflectivity of the consumable, comparing a value of surface light reflectivity to a look-up table, and determining consumable type therefrom.

[c4] 4. The method of claim 1 further comprising measuring a magnetic field induced current in a detector coil, comparing a value of the current to a look-up table, and determining consumable type therefrom.

[c5]   5. The method of claim 1 further comprising measuring surface sound reflectivity of the consumable, comparing a value of surface sound reflectivity to a looktable, and determining consumable type therefrom.

[c6]   6. The method of claim 1 wherein the welding-type process includes plasma cutting and the consumable includes a cutting or a gouging component.

[c7]   7. The method of claim 1 wherein the operating parameter includes at least one of power source output current and gas pressure.

[c8]   8. The method of claim 1 further comprising displaying an indicator of consumable type on a power source display.

[c9]   9. A welding-type system comprising:
a power source;
a consumable electrode holder; and
a controller configured to automatically determine a type of consumable disposed in the consumable electrode holder.

[c10]   10. The system of claim 9 wherein the power source includes a menu window and the controller is further configured to display an indication of consumable type on

the menu window.

[c11]   11. The system of claim 9 wherein the controller is further configured to automatically adjust one or more operating parameters of the power source based on at least consumable type.

[c12]   12. The system of claim 11 wherein the one or more operating parameters includes at least an amperage of an output current of the power source.

[c13]   13. The system of claim 9 further comprising a consumable type detector circuit configured to transmit feedback to the controller indicative of physical characteristics of a consumable disposed in the consumable electrode holder.

[c14]   14. The system of claim 13 wherein the detector circuit includes a sensor designed to measure a light reflectivity of an outer surface of the consumable.

[c15]   15. The system of claim 13 wherein the detector circuit includes a sensor designed to measure a resistance of a pin of the consumable connecting the consumable to the consumable electrode holder.

[c16]   16. The system of claim 13 wherein the detector circuit includes an induction circuit designed to output a cur-

rent proportional to a magnetic field generated by the consumable.

[c17]   17. The system of claim 13 wherein the detector circuit includes a sensor designed to measure sound reflectivity of the consumable.

[c18]   18. A plasma cutter comprising:

a power source configured to condition raw power into a form usable by a plasma cutting process;

a pressurized gas source;

a torch connected to the power source and the pressurized gas source, and configured to effectuate the plasma cutting process; and

means for detecting a type of consumable disposed within the torch.

[c19]   19. The plasma cutter of claim 18 further comprising means for automatically controlling the power source based on at least the type of consumable.

[c20]   20. The plasma cutter of claim 19 wherein the type of consumable includes a one-piece consumable.